

REMARKS

Figure 1 of the drawings has been amended to show the demodulation and digitization of the signals received by the receivers before being passed to the computer.

Claim 40 has been rewritten to make it more readable but without changing any of the features of the invention.

In this most recent Office Action, the Examiner has rejected Applicant's new claims 40-56, 63 and 64 under 35 U.S.C. §103 over Clough et al (Clough). Clough cannot be used to reject any of Applicant's claims. Clough does not demodulate the incoming signals. Neither does he synchronize them. Neither of these operations is shown or described or implied in Clough. In using Clough, the Examiner states:

The first receiver digitizes (figure 1 item 5) the voice data and noise signals.

Figure 1, item 5 is merely labeled "A/D". Nowhere in the Abstract, the Specification, or the Claims is the word "digitize" used, mentioned or even implied.

The Examiner goes on to state:

The receivers are synchronized to one another since the two signals being obtained have the noise components being correlated (column 4 lines 1-5). The definition of synchronization is having events occur at the same time.

Nowhere in the Abstract, the Specification, or the Claims is the word "synchronized" used, mentioned or even implied. The Examiner is not permitted to put words into the mouths of patents. Were that allowed, only one electronic patent would have ever been

issued from the U.S. Patent Office and it would thereafter "impliedly" anticipate or obviate all other inventions made subsequent thereto. Further, in complaining about Applicant's drawings, the Examiner states:

...the means to digitize and demodulate the received signals and the converting signals to a corresponding voltage or current must be shown or the features canceled from the claims.

The Examiner has "divined" that Clough involves digitization and synchronization yet nothing is shown, in the specification or in the drawings, to support this argument. However, he insists that Applicant place such notice *in Applicant's drawings* of the allegedly same operations. This is sheer fantasy.

As to the argument about synchronization being based upon two things showing up at the same time, Applicant's counsel enters his office at 7:30 a.m. each morning during the week just as Applicant's secretary also enters his office. Applicant is not married to his secretary. Neither Applicant's counsel or Applicant's secretary has ever discussed the "synchronization" of their arrivals. The Examiner is making arguments where there is no common sense basis for them.

The Examiner go on to state:

These noise components are correlated so they occur at the same time. This allows the subtractor 12

First the Examiner said the noise components were "synchronized". Now he says they are correlated. Correlation is different from synchronization and one does not imply the other. More shocking is the Examiner's use of the word "subtractor" in his reference to

item 12. The inventors define item 12 as "...a summing circuit..." (column 3, line 29) and (column 7, line 14). Nowhere in the entire Clough patent is there a "subtractor 12" or any item termed a "subtractor".

The Examiner again unfairly reaches his interpretation without using the words of another. He states "...it is presumed the distance will be...". This is another example of the Examiner making his own interpretation of a patent where the patent does not provide any rational basis whatsoever.

In paragraph 3 of the latest Office Action, the Examiner states:

Clough also states in column 7, lines 48-52, the signals are sampled at the same constant discrete time intervals in each A/D converter. The A/D converter is a component of each of the receivers. If the A/D converters are synchronized, then the receivers are synchronized.

This is a stunning statement. In the first place, lines 48-52 are in the *claims* of the Clough patent. In the second place, 35 U.S.C. §112, 2nd paragraph requires the claims "particularly point out and distinctly claim the subject matter which the applicant regards as his invention". Clough states, at lines 48-52:

(c) sampling means connected with said first and second microphones for sampling the speech and other signals at constant discrete intervals of time, the speech signals representing information and noise and the other signals representing noise..."

Not only does Clough not mention synchronization, but the Examiner cannot point to any place in the specification where such statement is made. Thus, under 35 U.S.C. §112, 2nd

paragraph, this part of a claim cannot be used as a basis for rejecting someone else's claim.

In the third place, the Examiner does not understand that "sampling" doesn't mean "synchronizing" nor does it mean "demodulating". In the fourth place, sampling of two separate streams of signals at constant discrete intervals of time does not mean that the sampling or the signals are synchronized. Sampling of two separate streams of signals at constant discrete intervals of time does not mean that the signals are demodulated. The Examiner does not show the antecedent basis for this statement in the Clough claims. In all of counsel's 34 years as a patent attorney, this is the first time he can remember having his client's claims rejected on the basis of the *claims of another patent*. Nowhere in Clough is the word "synchronize" even printed. This rejection argument is a fantasy of the Examiner's imagination.

The Examiner makes the following statement in paragraph 3 of his Office Action:

"The A/D converter is a component of each of the receivers. If the A/D converters are synchronized, then the receivers are synchronized."

In the first place, there is no disclosure, implication, or suggestion that Clough's A/D converters are synchronized. The word "synchronizing" [as well as the word "demodulation"] does not appear in Clough. Again, this is a fantasy. In the second place, implying that if one component is synchronized then another component is synchronized

is simply ludicrous. Clearly, no patent Examiner would allow this sort of twisted logic to be used as support for any claim in a patent. Likewise, no such twisted logic should be allowed as a basis for rejection of a claim.

The Examiner misses the point of Applicant's invention. While Clough, Chang and others direct their inventions to cancel audio signals, that are typically in the range of 20Hz to 20,000 Hz, Applicant's invention is used to cancel RF signals that typically are in the range of several million Hz to several billion Hz. Still further, while audio signals travel very slowly, RF signals travel at the speed of light which makes acoustics much easier to cancel. None of this is suggested in Clough.

The Examiner goes on in paragraph 8 of his Office Action to state:

Chang discloses a system for suppressing noise signals from a signal containing both voice data and noise signals. The system comprises a first receiver operative to receive both noise and voice data (abstract) and a second receiver operative to receive primarily the noise signals (abstract). The first and second receiver(sic) are synchronized. Chang states the noise components of the received signals are correlated so they will occur at the same time (column 4, lines 44-50). The noise components will occur at the same time since anytime differences will be compensated for (column, lines 51-56). An adaptive filtering means suppresses the noise signals in order to extract the voice data (figure 2 and abstract and column 6, lines 8-15). Chang discloses the noise signals and the voice data/noise signals inputs are received by microphones (column 5, lines 17-29) and the microphones are spaced apart some distance apart.

The Examiner fails to understand, again, that just because two receivers receive the same signal, **they are not synchronized unless it is said that they are synchronized.** In

addition, neither the words "synchronize" or "demodulate" appear anywhere in Chang. Chang has no relevance to applicant's invention.

In addition, if the Examiner had taken the time to read Chang, he would have noted that Chang deals only with a very limited frequency range, 3,000 Hz according to the inventor (column 5, lines 46-47). Chang divides this 3,000 Hz band into 15 bands, each 200 Hz wide. Has the Examiner thought about the billions of frequencies in an RF situation? Had he done so, he would immediately recognize that Chang's 15 filters of 200 Hz each would become *5 million band pass filters*. How is that for obviousness? Chang could not work in Applicant's RF environment (who could afford 5,000,000 band pass filters?) yet the Examiner finds Chang's approach to noise cancellation to render Applicant's invention obvious.

In his latest Office Action, the Examiner states:

Although Chang does not disclose(sic) receiving radiated emissions and ambient signals, Chang does disclose receiving a desired signal (the information signal) and an interfering signal (noise signal), receiving the interfering signal (noise signal) and subtracting the signals to recover the desired signal. It would have been obvious for one of ordinary skill in the art at the time of the invention to utilize this method of cancellation in any application that required the elimination of interfering signals to allow for the recovery of the desired signal.

If it were so obvious, why did the U.S. Patent Office allow Chang to issue in light of the already issued patent to Clough? All Chang did was to place a bunch of adaptive filters in Clough's noise cancellation device. The Examiner's analysis does not ring true.

The Examiner goes on to say:

Chang does not disclose digitizing the received signals prior to the cancellation step. It would have been obvious for one of ordinary skill in the art at the time of the invention to digitize the received signals. The digitized signals are much easier to store. The stored data will provide a reference and allow the received data to be monitored at a later data(sic) to ensure proper reception had occurred.

It appears the Examiner understands that Chang does not involve synchronization or digitizing. His comments concerning the obviousness of including these steps in Clough or in Chang has no basis in fact or in common sense. And, the Examiner has not given any reason why this obviousness was present in 1983 and in 1988, the respective filing dates (hence the "at the time of the invention") of the Clough and Chang patent applications. Without anything more, such rejections cannot be upheld.

Not to beat a dead horse, but on page 9 of his Office Action, the Examiner states:

Change discloses the receivers are synchronized (column 4 lines 44-56)

Applicant's counsel is well aware of the rule that all correspondence and communication between an inventor, his counsel, and the Patent Office are to be conducted with decorum and courtesy (37 CFR §1.3). However, it is very difficult to be courteous in replying to one who completely and totally misstates the facts. There is nothing in column 4 lines 44-56 that in any way state, mention, suggest or imply that Chang discloses the receivers

are synchronized. That is an absolute misstatement of fact and Applicant's counsel will not dignify it with an answer.

However, Chang is more important than merely what the Examiner said about it. Enclosed as Exhibit A is a copy of Chang supplied by the U.S. Patent Office along with the first Office Action. Note that Chang has three drawing figures. Note also that Change has no reference numbers in any of these drawings. Below is a Glossary of the terms used in Chang's specification to describe his invention:

<u>Figure</u>	<u>Item Number</u>	<u>Figures in which the Item Numbers are Shown</u>
1	10	prior art (No number shown)
1	11	subtract circuit (No number shown)
1	12	one microphone (No number shown)
1	13	another microphone (No number shown)
1	14	adaptive filter (No number shown)
1	15	voice recognition system (No number shown)
2	16	invention (No number shown)
2	17	sensor (No number shown)
2	18	sensor (No number shown)
2	19	group (col 5/line 49) narrow band filter (5/57) (No number shown)
2	20	group (5/49) narrow band filter (5/58) (No number shown)
2	21	adaptive filter (No number shown)
2	22	group (No number shown)
2	23	voice recognition system (No number shown)
3	24	? (No number shown)
3	25	? (No number shown)
3	26	? (No number shown)

35 U.S.C. §112 states in part:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly

connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Chang does not contain a written description in full, clear, concise, and exact terms as required by Section 112.. Chang is a joke as a patent. It has no drawing numbers with which to explain the invention. It does not use the word "synchronization" or the word "demodulate" anywhere in the Abstract, the Specification or the Claims yet the Examiner insists Chang is an invention using synchronization. Chang should never have been issued by the U.S. Patent Office because it violates 35 U.S.C. §112 in such an egregious way as to be totally useless as a patent and a prior art reference. Applicant requests that Chang be withdrawn from consideration as prior art. Further argument about Chang and how it impacts the outstanding claims is considered a waste of time.

The Examiner has rejected Applicant's Claims 40-53, 63 and 64 under 35 U.S.C. §103 over Mesecher et al. (Mesecher). The differences between Mesecher and Applicant's claims are quite obvious. Mesecher is directed to cancellation of one or more "known" and "fixed" ambient signals (column 1, lines 7-13), that is, the patent requires that the direction of arrival of the ambient signals are fixed and do not change. Applicant's patent application and its claims apply to ambient signals regardless of where the ambient sources are located, regardless of how many ambient signals there are, regardless of how often the source locations change, and regardless of whether the same interfering signal arrives from one or multiple paths. Mesecher assumes that each interfering signal operates at a single "known" center frequency (column 1, lines 66-

column 2, lines 1-2). That is, if the known interference signal changes its enter frequency, then the system can no longer subtract it without recalibration. Applicant's claimed invention shows that it is a system that continuously identifies a wideband interference which suppresses multiple interfering signals, i.e., the system works even when the frequency of the interfering signals are changed, turned off, or new ones introduced. Finally, Mesecher removes interfering signals by "subtracting" them (abstract) from the received signal while Applicant's patent claims identify a system that removes "unknown" ambient signals using correlation techniques and not by "subtracting". Accordingly, Mesecher has no application to Applicant's patent.

The Examiner is quick to point out that Mesecher does not disclose the received signals are digitized prior to the subtraction taking place. The Examiner has not shown Mesecher will work if the incoming signals are digitized prior to subtraction taking place. In light of the fact that Applicant's invention does not use subtraction, the Examiner has failed to support his next contention that:

It would have been obvious for one of ordinary skill in the art at the time of the invention to digitize the signal at any point prior to being input to the modem so the signal would be in proper format for the processing and storage in the modem to take place as well as simplifying the circuitry required for the subtraction to take place in the interference canceler.

The Examiner is taking Mesecher out of context, has added his own invention, and is attempting to use this patent to reject Applicant's invention. Beside the fact that, in using Mesecher to reject Applicant's claims, the Examiner has criticized Mesecher for not

including digitizing prior to being input to the modem which is not only unwarranted in this case but indicates the Examiner is using Mesecher, not for its teaching of the invention, but as a framework to reject patents that have nothing to do with Mesecher's objects.

In summary, the Examiner has not shown any patent or prior art that discloses Applicant's claimed invention. The Examiner cannot find things that are not there; he cannot find synchronization where it doesn't exist just as he cannot find demodulation where it doesn't exist, and it clearly doesn't exist in any sense in the patents that the Examiner has cited.

The Examiner has indicated that Applicant's prior arguments are "moot" in light of something. He has not indicated what this something is. It clearly is not the Mesecher patent. Applicant's counsel flatly becomes annoyed when the hard work that went into showing the Examiner where Applicant's invention lies is summarily dismissed with such an impotent term. The Examiner is invited to review Applicant's specification and claims in order to reacquaint himself with Applicant's invention where he will see that the cited references are not obviating.

CONCLUSION

The newly cited Mesecher patent is no more a basis for obviating Applicant's claims than the previously cited patents to Clough et al and Chang. None of the patents,

singly or in combination, teach, suggest, imply, or disclose Applicant's claimed invention.

Chang should not be considered at all as it totally violates 35 U.S.C. §112, 2nd paragraph.

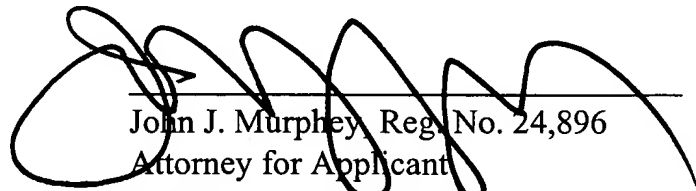
Applicant has amended Claim 40 to make it more readable without changing the inventive content thereof. Applicant has amended Figure 1 of the drawings to show the steps of demodulating and digitizing the incoming signals as part of the receiver.

Applicant has responded to those arguments in rejection of Applicant's claims as set forth by the Examiner in this latest Office Action.

Applicants' counsel has addressed all issues raised by the Examiner in his latest non-final Office Action. If any issues have not been adequately addressed it was purely unintentional and the Examiner is invited to telephone counsel. The application now appears to be in condition for passage to allowance and such action is earnestly solicited.

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Respectfully submitted,



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